jr Newsletter

June 1987

New Cartridges Can Improve Your PCjr's Performance

Those empty cartridge slots that stare out from the face of your PCjr like a pair of abandoned eye sockets are not as useless as you may think. There are some new cartridges designed especially for those slots that can open the way to increased speed, and improved performance for your PCjr.

The latest, and perhaps most dramatic in its effect, is the jr Video Cartridge ($29.95), which speeds up the PCjr's display of information on the screen. The results are quite startling with software that uses graphics, with applications that require frequent scrolling or moving across vast areas of information, such as spreadsheets, and when using the DOS DIR and TYPE commands.

With the jr Video Cartridge installed, the PCjr's often sluggish ROM BIOS video routines are improved, making screen writes much slicker, particularly if you have already installed additional memory on your PCjr. (ROM BIOS is the Basic Input/Output System built into your PCjr to control the computer's operations.) Memory expansion substantially improves your computer's processing speed, but the jr Video cartridge provides additional zing by bringing the results to your screen more quickly.

"Dad, do you think you could let me use my PCjr once in a while?"

Although the overall speed of your PCjr will increase with the insertion of the jr Video Cartridge, the results are not universal. Software that does not use the BIOS, but goes to the video buffer will not be improved. On the other hand, with the cartridge installed, Pacman runs around the screen so fast you may not be able to keep up with him.

The cartridge was developed by David Cox of Cryptographics Software, Toronto, Canada and is distributed by PC Enterprises (800) 922-PCJR.

Pseudo DMA

Another cartridge developed by Cox is the Keyboard Buffer Cartridge ($29.95), also known as the jr Synchro Cartridge, which enables up to 47 characters typed on the keyboard to be "buffered", or momentarily held back, while the computer is accessing the disk drive. This will keep your jr from beeping at you, since the characters you type can be stored briefly and then fed to the computer when it is ready to receive them.

Technically speaking, the cartridge contains routines which replace the keyboard and diskette I/O (Input/Output) routines on your jr's ROM BIOS. The new routines synchronize keyboard and diskette operation so

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READER FEEDBACK

PCjr Owner Shares Tips

I would like to add some of my comments to those you have made in answer to questions and problems other users have had.

I upgraded my jr with a Tecmar jr Captain board simply by removing the 64K chips and replacing them with 256K chips. The board I have installed used plug in sockets and so soldering was required.

I have used the Procomm communications software with an external modem with no problems, and no need to run a program to swap ports. Simply set the communications parameter to COM2 in the Procomm program.

The best and easiest to use RAM disk program that I have found is a public domain program setram.exe, used with ram.sys. This allows removing the ram disk without rebooting. It also allows those of us with only one physical drive to copy from drive A: to drive B:. The CONPCJR program that is provided with the Tecmar jr Captain board refuses to recognize that there is only one physical drive unless you boot with the -d1 option.

Another excellent program for those with 640K of memory is JRCONFIG.SYS by Larry Newcomb, which can be found on bulletin boards. This program has several excellent features and is the best program for the jr that I have found.

Now I have a question that I hope you can help me with. The fan on my jr is noisy and extremely annoying. It is too noisy to let the jr run when I am not using it. Does anyone know of a way to quiet it? Oiling it has not helped. Is there a replacement available that I could live with? Any suggestions would be appreciated.

Glen Peterson
New Baden, IL

EDITOR'S NOTE: We are putting together a disk full of great PCjr utilities that will include SETRAM.EXE AND JRCONFIG.SYS, along with others we have discovered. We'll be writing it up as soon as we get it put together. As for that noisy fan, ours doesn't bother us, but noise is a subjective thing. We don't know of any way to silence the fan, other than disconnecting it, which you wouldn't want to do. We do know that you can replace the fan with one of similar size sold by Radio Shack. Perhaps you should try that, Glen.

Running dBase III on PCjrs

I have a Racore Drive, 512K memory, two drive PCjr. I have been having problems getting the Racore (without DMA) to run dBase III. I keep getting "unauthorized duplicate," though the program runs fine on a regular IBM clone.

I have tried the config systems for regular, enhanced and compatible Racore modes. I have tried it with DOS 2.1 and 3.1, but the system would crash when I added the Racore Device Drivers in the CONFIG.SYS. Help !

Everyone tells me that dBase III will run. What could be the problem?

Bill Osak
Visalia, CA

EDITOR'S NOTE: It sounds like you have the early copy protected version of dBase III, which we have heard will not run on PCjrs. Later versions run fine, as does dBase III Plus. Maybe Ashton-Tate will have sympathy for you and provide you with an updated version.

* * * *

Managing Your Money on Your PCjr

I would like to contribute my experience with Managing Your Money by MECA and would like to hear from others who have used this popular financial software on the PCjr. MYM can be configured for most any IBM PC system by following the instruction booklet for either one or two disk drives or hard disk. However no mention is made of using the Ramdisk. Following the one-disk procedure for PCjr (256K minimum) is at best confusing and requires numerous disk swaps. This disk swapping dampened my enthusiasm for MYM until I discovered how to use it with the ramdisk.

I have the PCjr with one disk drive to which I have added the Quadram 128K expansion. I have replaced the 16K memory chips with 64K chips and added a power supply to arrive at 640K. There are two basic options that could utilize the ramdisk for more efficient MYM operation: (1) use the ramdisk to simulate a two-disk system or (2) simulate a hard disk system. I have so far only explored the first option. To do this you make the system look like drives A and B to MYM. You follow the instruction booklet for two-disk installation: you put

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WordPerfect on the PCjr

By John King
San Francisco PCjr Users Group

WordPerfect 4.1 and 4.2 are powerful, expensive ($225, discounted price) word processing programs. If you need to use one of these, you'll find that they work extremely well, on a single disk drive PCjr as long as you have at least 512K of RAM.

Fortunately, WordPerfect has an option which allows the whole program to be loaded into memory. If you copy the other files needed by WordPerfect to a ramdisk, the program disk can then be removed and is not needed again during the session. The disk drive is then available for a data disk, the Speller disk, or the Thesaurus disk.

You will need to create a ramdisk and copy these files to it:

WPFONT.FIL
WPPRINTER.FIL
(WP)SYS.FIL
WPHELP.FIL

These files take up about 75K bytes. If you are using a sheet feeder, you will have to copy WPFEED.FIL, as well.

WordPerfect will also store temporary overflow files on the ramdisk if you are working on a large document. Therefore, it should be at least 100K. However, be sure to leave at least 300K free memory for WP.EXE. You can use CHKDSK.COM from you DOS disk to check free memory after the ramdisk is installed. The command to start WordPerfect is: WP/R/D-C:

The /R loads WP.EXE completely into memory, and D-C: tells WordPerfect to find all necessary files on ramdisk C:. If your ramdisk is not C:, substitute the appropriate letter.

As finishing touches, you can try these. Add the line BUFFERS = 10, or 20, to your CONFIG.SYS file. This will speed up the loading of large programs. Write a batch file to do the copying to the ramdisk, or add this to the AUTOEXEC.BAT file. Then, you can start WORDPERFECT with just WP and the options will be automatically invoked.

For more information, consult the Installation and Appendices manual in your WordPerfect binder.

* * * *

Have a Comment or a Tip?

Share your experience with other PCjr owners by writing to: jr Newsletter, Box 163, Southbury, CT 06488. We'd like to hear from you.

Lotus Installation Notes for the PCjr

EDITOR'S NOTE:The following article wa downloaded from the IBM EBBS. The author did not include his/her name, but the tips seemed worth reprinting for those of you who use or want to use Lotus 1-2-3, which is one of the most popular programs among PCjr users.

Here are some general notes to install Lotus correctly on the PCjr. You must have 256k to run Lotus!

If you have a color monitor you must install the following drivers on each of the Lotus Diskettes.

1)IBM0COLO.DRV = = rename as TD.DRV
2)IBM3PR.DRV = = rename as PR.DRV
3)KB.DRV found in this archive
4)GD.DRV found in this archive

If you have a b&w monochrome monitor you must install the following drivers on each of the Lotus Diskettes:

1)IBM0B&W.DRV = = rename as TD.DRV
2)IBM3PR.DRV = = rename as PR.DRV
3)KB.DRV found in this archive
4)GD.DRV found in this archive

After you have followed the directions outlined in the "Getting Started" chapter at the beginning of the 1-2-3 User's Manual you must then reconfigure Lotus to run on only one disk drive.

1-2-3 initially assumes that the 1-2-3 System Disk is in drive A and the data disks are in drive B. If you have a one drive system, change the default configuration so that you can run 1-2-3 and save worksheet files using one disk drive. To do this, load 1-2-3 and then type /WGDD.

A prompt will appear: Current Directory at Startup: B: indicating that 1-2-3 will save files in drive B. Since you do not have a drive B, press [Esc] to erase B: . Type A: and press [enter]. You will be prompted to

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Explore jr's Memory Using DEBUG

EDITOR'S NOTE: This description of how to use the DEBUG program on your DOS disk to explore your jr's memory comes from the Eugene, Oregon PCjr Club and was written by Leon Ungier.

Want to learn about the inner workings of your PCjr? DEBUG, the utility provided with your DOS, is ideal for this. You can use DEBUG, for example, to examine what is in the memory of the Junior. This, in some cases, can be quite revealing.

Low memory is of some interest. Low memory means memory located at low addresses, say from address 0:0 to 0:500. In particular, there are two bytes in memory at addresses 0:417 and 0:418 which control the action of the keyboard and are called, quite appropriately, keyboard status bytes. All PC models have these two bytes. When you press any special keys, like Shift or CapsLock, you are modifying the response of your keyboard and, at the same time, you are changing specific bits in the two bytes at addresses 0:417 and 0:418. We can do it the other way around, as well. Using DEBUG, we can change a specific bit in byte 0:417 and this would have the same effect as we would have by pressing the CapsLock key.

Commands

We will use just two DEBUG commands here: D, for dump, which displays memory contents at specified addresses; and the other, E, for Enter, which displays a single byte and waits for you to type the value you want to change it to. One more command you will need is to exit DEBUG. This is Q for Quit. To make any instructions easier to describe, I will assume that you have just turned on your Junior and you have not pressed any special keys.

At the A > prompt, type DEBUG and press Enter. Then type d 0:417 418. Your screen would look like this:

```
A > DEBUG
-d 0:417 418
0000:417 00-00
-
```

In the second line, you have asked Junior to show you the contents of two bytes at addresses 0:417 and 0:418. In the third line, the computer repeated the starting address and then showed that the two bytes are all zeros Now type again d 0:417 418 but this time, press the left Shift key and keep it pressed while pressing the Enter key. You will see that the Junior will respond with 0000:417 02-00. So, the byte at 0:417 is not all zeros any more. It has its first bit set. You can do the same with the right Shift key and you should see 0000:417 01-00 in response.

Now press CapsLock and then again type d 0417 418 and Enter. The Junior will respond with 0000:417 40-00. Again, the first byte has changed. Press CapsLock and type d 0:417 418 (or Fn 3 instead) and you'll see the byte returned to its previous value. This means by toggling the CapsLock key, you are changing bit #6 in the 0:417 byte, and the computer responds to that by toggling the letters you type from lower case to upper case and back. It is not as straightforward to see as one may want because DEBUG displays the contents of the memory in hexadecimal form, grouping every 4 bits into a hex digit, rather than showing the individual bits.

Using Enter

Now, as I said before, instead of toggling the CapsLock key, you can change the byte 0:417 and see that it has the same effect. Type E 0:417 and press Enter The computer will display a number currently in memory (it will be one of those you have seen while toggling the CapsLock key), and will wait for you to type the number you want to change it to. Type the other number and press Enter. The letters you'll type from now on will change lower to upper case or vice versa.

What we have done so far would work just fine on a Junior or on a PC. There is, however, a bit in the byte 0:418 which is unique to the PCjr, but #2. PC or PCXT ignores this bit, while our Junior makes the keys click when this bit is set (which means equal to 1), or not clicking when this bit is zero. You are actually changing this bit when hitting simultaneously the Ctrl- Alt-CapsLock combination and displaying the byte 0:418 again. Then try directly changing the click bit by typing E 0:418 and Enter, and then typing the other number you have seen. As soon as you enter the other value, you will hear the change in the audible response of the keys you are hitting.

It is actually quite easy to write a very short machine program, using DEBUG, which would set bit #2 in the 0:418 byte. Then, instead of hitting the three key combination, you would run this program. Or you can include that program in the autoexec.bat file so the keyboard would start clicking automatically after you turn on your computer.

* * * * * *

Do you have any tips or interesting jr experiences you'd like to share with fellow jr owners? If so, send them to **jr Newsletter**, Box 163, Southbury, CT 06488.

Managing Your Money

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MYM disk 2 into drive B (ramdisk) and disks 1 and 2 into drive A as called for within program execution. You then only have to swap disks when you move to a chapter on a different disk.

Following the procedure described below you can fit the entire MYM program into a 640K PCjr. If you have less memory than this try omitting chapters when copying from disk 2 to the ramdisk.

This is my procedure:

1. Create a DOS disk with the following modifications: (a) shift 16K video to lower memory and (b) set up a 340K ramdisk. If you have the Quadram expansion this requires two instructions in your CONFIG.SYS file.

2. Boot up with the new DOS disk. If you do a CHKDSK C: at this point you should have approximately 257K of working memory left for program execution, a tight squeeze.

3. Do ASSIGN B = C, thus PCjr thinks the ramdisk is drive B.

4. Format three new disks and copy MYM disks 1, 2 and 3 onto them as described in the MYM instruction booklet.

5. Copy disk 2 (drive A) to drive B (340K ramdisk).

6. Insert new disk 1 into drive A and do AUTOEXEC and you are in business. Note that MYM instructions tell you to do Cntrl-Alt-Del at this point but this will destroy your ramdisk, while AUTOEXEC does the boot up without this destruction.

7. After you sign-off from MYM and before shutting off the power save the ramdisk to disk 2 if you have used any of the chapters in disk 2 and have developed some new data there that you desire to keep.

Dick Shire
Los Alamos, NM

* * * *

Using Quadram/Racore's PC-JR Switch

I am glad you are publishing this newsletter which I enjoy reading and find very useful.

I wonder whether you, or one of your readers, may know the answer to a problem I frequently have with my expanded jr. I upgraded my original jr with a Quadram Expansion Chassis (QuadMasterjr) to give me a second disk drive and a total of 500K memory. This module is provided with a toggle switch for selecting either the "jr" mode or the "PC" mode. I expected that this module with the switch in the PC mode would in fact convert my jr to a "Sr", i.e. the IBM PC.

While this is true for spreadsheet, word processing and other business and technical software, I have trouble with many games. Although they may be written for the IBM PC I have to switch to the "jr" mode to run them. Also, with some games such as the Fligh Simulator which give a choice of "PC" or "jr" I am forced to experiment until I find the right mode. What is the problem? Is there a way of staying in the "PC" mode for all programs (except those written specifically for the jr)?

Charles Marks
Sharon, MA

EDITOR'S NOTE: The Quadram units were manufactured by Racore, which also makes units under its own name with the "PC" and "jr" modes switch. Although these units work very well and make PCjrs almost fully compatible with PCs, 99 per cent compatibility is about as far as the PCjr can be taken. The switch on Racore and Quadram units, as we understand it, was designed so that you would not lose some of the PCjr's special abilities with graphics and sound in your rush to become compatible with the PC. As a result, you are generally better off running games in the jr mode and other software in the pc mode — although we know people who just keep the switch in the jr mode and are quite able to run all the software they need. Some problems can occur if your boot disk's CONFIG.SYS file is not the right one for the PC or jr switch position you have selected. But this is easily avoided by following the installation instructions provided with your unit and keeping track of which configuration you are using.

* * * *

Message from PRO-KIT User

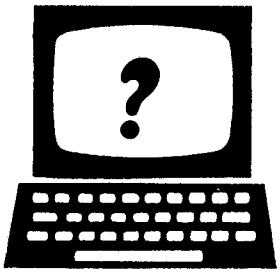
Just a note to say how delighted I am with your publication--it just keeps on getting better each month.

Want you to know that my jr was expanded using a PRO-KIT Expansion Module manufactured by MA Systems Inc. of San Jose, CA. Unfortunately, theirs was an early effort and when the jr was dropped they bailed out and have not been helpful in ironing out the users' (my) problems. Anyhow, the PRO-KIT provides 512K memory (640 total), Clock-Calendar, Parallel Port, Print Spooler, RAM-disk, and a few incidental software items. Problem was it wouldn't work well with Cartridge BASIC—had to go to GWBASIC to do anything useful with it.

Thought I'd let you know in case some other subscriber has one and wants to make contact.

Thanks again for a fine publication and here is my renewal.

Bob Bassett
Ash Fork, AZ



Questions and Answers

EDITOR'S NOTE: jr Newsletter gets questions in the mail from PCjr owners every day. Some of the questions are asked, in one way or another, by several people so we assume there are more of you out there who have similar experiences and/or problems. The questions in this column are those that we feel will be of interest to many PCjr owners. If you have a question that you do not see answered here, or elsewhere in this newsletter, please feel free to write to us at jr Newsletter, Box 163, Southbury, CT 06488. We PCjr owners are all in this together!

Q. I would like to take advantage of the added storage capacity of 3.5" drives. Am I stuck with the 5 1/4" drives on my PCjr or is there a way I can modify the jr to use 3.5" drives ?

A. This question has been asked more and more frequently lately, perhaps because of IBM's introduction of its new system, which uses 3.5" drives. They are capable of storing twice as much data as 5 1/4" diskettes and are also supposed to be more reliable. In order for your PCjr to use 3.5" drives, you need a driver controller and software to take advantage of the 80 tracks and 720K format on 3.5" drives. Ordinarily the software is DOS 3.2 , which is designed to work with these smaller, but more capacious diskettes. However, PC Enterprises has put together not only a 3.5" drive expansion chassis which can go on top of your current drive, either as a third or a second drive, it has also come up with software to use the drives with DOS 2.1, allowing you to store up to 813K on each diskette. For more information call 1-800-922-PCJR.

Q. I have tried using Freelance, by Lotus, on my PCjr, which has 640K and two drives, but although I can get it running and I can even use the Microsoft mouse with it, I can't get the keyboard to work. I thought the few incompatibilities between PCjrs and PCs had to do with the video location and graphics, but what's the problem with the keyboard?

A. There are some differences in the way your PCjr handles keyboard information. These differences rarely interfere with running programs written for PCs, but it is possible that they could. The most likely problem is that your PCjr's keyboard does not have a buffer in it like the PC's keyboard has. On the PC, if the computer isn't quite ready to accept the input from the keyboard, the keyboard can "store" the keystrokes and feed them to the computer when it is ready to accept them. PCjr keyboards generate a non-maskable interrupt, which means the ROM-BIOS (the input/output system that is programmed into your jr's ROM) has to act upon the keyboard input immediately. Also, due to a bug in the Input/Output routines in the PCjr BIOS (the Read Only Memory system that handles input from the keyboard among other things), your computer can lock up under certain circumstances, such as when you press or release a key while the computer is writing to or reading from a diskette. These lock-ups are very rare, but they can occur. However, since we do not know for certain that this is the cause of the problem when using Freelance, we'll go on to the good news — we have heard that loading Superkey or possibly other keyboard programs, enables you to run Freelance on a PCjr. Although we could speculate on the reasons why this solves the problem, we don't want to waste any more space on guesses and will just leave you with the fact that this solution apparently works.

Q. I use PC-Write for many different kinds of word processing tasks and I would like to be able to customize the key strokes so that I could type one or two keys and have 20 or 30 keystrokes executed automatically. Is this possible to do with PC-Write?

A. Yes, it's quite simple to do and it can be done in any of the versions of PC-Write. We use that capability all the time. In version 2.7 you type ED ED.DEF (or the file name of another ED file if you have set one up yourself). Then, in order to be able to use the control key in combination with another key to carry out any number of keystrokes, you type in the key you want to use in combination with the control key, followed by a colon, and then the combination of keystrokes you want to be executed. If you want letters, you put them in quotation marks. If you want keyboard operations, such as Enter or backspace, etc., just put in the operation code number (there's a list in the manual). For example, putting this line in your ED.DEF file:

A:"Sincerely Yours,"

will enable PC-Write to type "Sincerely Yours," (without

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"Greetings" from the Error Center

By Francis X. Bolton

Occasionally, you may find yourself tooling along nicely using your computer thinking that it doesn't seem possible that only a little while ago, everything seemed so new and so complex, when BINGO!—you encounter an error message you've never seen before and forget the error message—your computer or your disk is behaving in a way that frightens you since you seem to have lost control or lost data, and who knows which is worse.

Although these little devils are messages, I wonder if the IBMer who named them such might not have considered calling them "Greetings," having in mind the title of the movie released a number of years ago. In the film, the "greetings" were draft notices to attend the Vietnam war—not something to be eagerly awaited.

One such message you might encounter is "Disk Boot failure." Another is "Unrecoverable" whatever (there are a variety of such messages, all signifying similar problems). Let's examine each of these briefly.

Disk Boot Failure "Greeting"

You may encounter the message Disk Boot Failure any time you turn the computer on, using either a cold boot (turning on the power switch) or a warm boot (restarting the computer using Ctrl-Alt-Del). That last situation may seem very odd, since you were just using a disk and now the computer cannot read the very same disk. Actually, a Disk Boot Failure means that something was wrong when the computer tried to read the disk when booting the computer. For some reason, the boot record is not readable. The boot record is put on all disks formatted by DOS (even non-system disks) in order to give an error message if you try to boot from a non-system disk. It is the first thing read into memory.

It is possible that something else might be wrong, perhaps an error in one of the hidden files which prevents the operating system from loading. But from experience, I suspect that if something is wrong here, you won't get a message but will get a lot of what most people think of as gibberish. In any event, DOS can't "load" the disk. But all the other data on the diskette is probably perfectly sound. (Ed. note: You will get this error if you are using a non-system disk for data and forget that it doesn't have the system on it.)

What Do You Do?

If you encounter the Disk Boot Failure message, make a DISKCOPY of the disk (two is not a bad idea), and then put the new copy in drive A and re-boot. Since the boot record should be all right, the new disk should boot normally, and all your data should be sound. This is because something was wrong with the disk boot record; but in using the DISKCOPY, the new disk is formatted, and a new boot record is placed on the new disk, not the old boot record.

If you are interested in what this all means, read Appendix B (DOS Technical Information) in the DOS manual, or at least the first several pages referring to DOS Structure and DOS Initialization. Despite the manual's presumption that one should know 8088 architecture, interrupt mechanisms or instruction sets (I don't), you should be able to follow at least those first two sections.

Unable to "Greetings"

Briefly, by the same token, if you encounter, "Unable to Write Boot" when formatting a diskette, it means that the first track of the diskette or DOS partition is bad, since the Boot Record couldn't be written on it. The diskette or DOS partition is not usable. Return a new diskette to your dealer to get another one; throw an old diskette away (I presume you didn't want any of the data on it since you were formatting it); create a new DOS partition on a hard disk since the current DOS partition is not usable.

Unrecoverable "Greetings"

Unrecoverable read error on source disk—new disk may be unusable. It makes your heart sink doesn't it! You are making a backup disk using DISKCOPY and lo and behold!—you have data that cannot be read on the source disk and probably wasn't copied onto the target disk. Other variations are unrecoverable format error on target disk (encountered when using DISKCOPY), unrecoverable write error on target disk. You may also get an unrecoverable read error when using DISKCOMP.

If there is an unrecoverable format error when using DISKCOPY, the problem is encountered in formatting, before your data is copied. You do not have a disk copy. Perhaps you should try formatting the same disk, rather than using DISKCOPY, to see if the disk can be formatted. Or simply insert another disk and make a DISKCOPY onto the new disk.

If there is a write error on the target disk when making a disk copy, all data will be copied to the disk but some file(s) may contain incomplete data. The message may say that DISKCOPY couldn't verify the write operation after it performed it on the target disk, implying that the write operation did take place. Thus, the target disk

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Warning: Junior's Sockets Can Be Easily Damaged

By Dick Page
Eugene, OR, PCjr Club

Junior's Sockets Easily Damaged! My column has been "down" for a while, and so have I, because my Junior was in for repairs. One of them is preventible and I thought you would like to know about it.

The connector sockets in the back of the PCjr look fairly sturdy. They aren't! The plastic separator, between the keyboard cable plug-in and the light pen plug-in, cracked because of the constant tug to the left by my keyboard cable. This bent the small brass pins to the left as well.

Occasionally, we disconnect the keyboard cable, to my KeyTronic 5151Jr keyboard, in order to use the standard PCjr keyboard. Recently, on attempting to reconnect the cable, I bent the brass pins. I tried to gently straighten the pins back, but two of them broke off. Unfortunately, the pins and their sockets are an integral part of the mother board, and therefore, are a costly item to replace. The mother board costs almost as much as a whole new PCjr!

Luckly, Del Shuck of Eugene Computer Repair was willing to fuss with my Junior and was able to solder in new pins. (Repair charge was $40). But the broken plastic separator cannot be fixed.

I now have a less portable, but functional, PCjr. I have tied down all the cables to a wooden board using small nylon straps from the electrical department of a local hardware store. There is no lateral stress on the sockets now, and we are very careful anytime we insert or remove cables.

The costly lesson for me: Beware! The PCjr keyboard may have been designed to be virtually indestructible, but the socket connectors certainly are not!

* * * *

PCjr Keyboard Scan Codes Are Different From PC's

Although single character scan codes on the PCjr are identical to those of the PC, the extended scan codes released by the PCjr keyboard are slightly different. If the Fn key is not released before pressing the F7-10 keys the following is true:

— Shift F9 gives no scan code on the PCjr.
— Ctrl F8, Ctrl F9, and Ctrl F10 give no scan code.
— Alt F7 also results in no scan code being released.

The shift print screen works just like the PC. The Control Print Screen is replaced by Fn/Echo.

* * * *

DON'T PLAY DISKETTE ROULETTE — MAKE BACK-UP COPIES IMMEDIATELY !!

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Customizing PC-Write

Continued from page 1

the quotation marks, of course) whenever you press Ctrl A. There is no limit to the number of words and operation codes you can assign to the Ctrl plus letter keystrokes, so you can save a lot of finger work if there are repetitive things that you do regularly with your word processor. In version 2.5 for those with 128K, it's the RULER file that you would edit rather than the ED file. Check the PC-Write manual for further details and other customizing possibilities.

* * * *

Error 'Greetings'

Continued from page 6

again may contain incomplete file(s). Remember that when you make a copy using DISKCOPY, sectors are copied, not files, so you may lose pieces of data from several files. Thus, all the files may appear in your directory on the new disk but some may be incomplete. Note too, the word "may."

If there is an unrecoverable read error on the source disk (under either DISKCOMP or DISKCOPY), the same thing is possible: there may be incomplete data on the target disk (and you should suspect your source diskette too), yet once again, the operative word is "may." On occasion, I have carefully checked all the data on the target disk after encountering such a message, only to discover that nothing which I could detect was awry.

These messages are there as a warning—if they refer to the source disk, you have twice as much to be concerned about as you would if they just refer to the target disk. Should you take them seriously? Yes. And you should probably take them more seriously if your data is primarily numbers instead of words, since the number may look normal and complete but not be, while words are more readily recognizable as incomplete or wrong.

Remember, too, that there is a whole section in the DOS manual that lists error messages. In DOS 2.0, it is section 8, with its own little tab saying "Messages." Or if you prefer, you may call them "Greetings."

* * * *

Tell Us When You Move

The Post Office will not forward your copies of jr Newsletter when you move, because the newsletter is mailed via Third Class Mail. So please notify us immediately when you change your address.

Notes from a DOS Dummy

"Experience keeps a dear school, but fools will learn in no other." — Ben Franklin. (The word "dear" meant costly in Ben's day. Although the usage may be outdated, the message isn't.)

For those of you who haven't had the class in using ERASE, here's a message from one who graduated recently:

ERASE *.* C:, when entered at the A > prompt will not erase the files from drive C (probably your RAM drive). Instead it will erase the contents of the diskette in drive A. So when your computer politely asks "Are you sure (Y/N)? don't say Y unless you really are sure.

This is one of those very BIG mistakes you can make unless you are careful. The correct way to erase the files from drive C at the A > prompt is to enter:

ERASE C: *.*

The placement of the C makes ALL the difference.

* * * *

1200 Baud Internal Modem Now Available for PCjrs

Although external modems which operate well on PCjrs at 1200 baud have been available for some time, the only internal modem for PCjrs we know of that would operate at 1200 baud was the ERA 2, which Microcom stopped manufacturing.

Now Paul Rau has announced that he has 1200 baud internal modems, which are fully Hayes compatible. He says he expects to have 2400 baud internal modems available soon.

Check Paul Rau's ad in this issue for price and ordering info.

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New Disks Offer Printer Utilities And Amazing Letter Quality

A new disk in our Software Store this month offers letter quality printouts on dot matrix printers and another disk has a collection of very useful printer utilities.

If you own a matrix printer and want letter quality print, you'll like Imageprint. This program is a simple, inexpensive alternative to purchasing a new printer in order to get letter quality. Since the quality of type is a subjective matter, some might feel that Imageprint only gives you near letter quality. But it's as good as other print we've seen described as letter quality, so we feel justified in using this term.

Imageprint can add letter quality type to IBM graphics printers, IBM Proprinters and the following series of Epson printers; FX, RX, LX, JX, as well as compatible printers. It will work from LPT1, LPT2, or LPT3, or COM1, COM2, but will not work with serially interfaced printers.

Three levels of print quality are available: fast, quality and laser. When using the quality mode, the print is similar to near letter quality obtained on newer, more expensive printers. The laser mode, which uses 6 passes, is even better—albeit slower. The program gives the printer proportional, bold, double-width, compressed, and underlined type styles. Italic and elite type are also included.

Imageprint has all the format features of a standard word processor. Page length, margin sets, headers and footers, automatic page numbering, centering, right and left justification, etc., can all be set from Imageprint. For those who prefer using a standard word processor, there is a special file to link Imageprint to PC-Write (also available in **jr Newsletter**'s Software Store). Imageprint may also be used with any word processor which generates a standard ASCII file with no hidden format commands. Commercial programs such as WORDSTAR or WordPerfect can be used in their non-document (or ASCII text) mode to produce a file for Imageprint.

The program is relatively easy to use; the documentation manual is very thorough and clear. And—to top it off—the print quality's teriffic! Imageprint is Software Store Disk #50 (see page 13).

Print Handler

Print Handler is a disk full of utilities for Epson printers. It includes a banner printing program, a sideways printing program, a custom font generator, a print spooler, a print control utility, and more.

With the banner program, you can make long banners similar to those produced by the commercial program Print Shop. The program functions best when the printer is in compressed mode, otherwise the letters are too spaced out. The large gothic letters are printed sideways, thus enabling the production of long banners on printout paper.

The sideways program is similar to the commercial program SIDEWAYS. It can print directly from the subject file, or a new sideways file can be created for later printing. It is a handy utility for printing spreadsheets which are too wide for standard paper.

The custom font generator allows the creation of new fonts, or type styles, which can be saved and downloaded to Epson FX series printers. This will allow the creative to design a new alphabet. Or simply copy a type style—such as Old English—from a printed source. The spooler, or print buffer, sets aside a specified amount of memory from one to 63 K. When operating, the document to be printed resides in the area set aside while being fed to the printer, thus freeing up the computer for further input or other use while the printing continues.

You may only be able to do one thing at a time, but this program will let your PCjr do two!

A printer control program, in resident and non-resident versions, enables the user to easily set options on Epson printers. Settings supported include print modes, format commands, page control, reset, etc.

All in all, this collection of utilities will make your printer more versatile and easier to control. Print Handler is Disk #51 in the Software Store, page 13.

IBM PCjr SPECIALS

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jr Newsletter Software Store

This software is the best public domain and user-supported software for the PCjr we've been able to find. All the programs in this collection have been tested on our PCjrs and are highly recommended. Some of these programs are equal to or better than commercial programs costing hundreds of dollars.

The programs in this collection are available for $9 per disk or $7 per disk, if you order four or more.

PC-WRITE. This extremely popular word processing program is both powerful and easy to use. A review in PC World said "PC-Write may well be more versatile than WordStar — it's certainly more straightforward." Version 2.5 runs well on 128K. Version 2.7 has more features, comes on two diskettes and requires 256K to run without the spelling checker, which requires 384K. (Order Disk #1 for 128K V2.5. Order Disks #2A and 2B for V2.7)

PC-FILE III. This excellent database manager will handle up to 9,999 records, such as names and addresses, notes, product descriptions, etc. Uses generic, embedded, soundex and wildcard searches. Global updates and deletes. Sorts on any field. Too many features to mention. (Disk #3 runs on 128K, Disk #4 needs 256K)

PC-CALC. A versatile spreadsheet program that can do up to 26 columns of adjustable size and 256 lines. Features on-screen prompts, many math and statistical functions, hidden column capability, many formatting options, 64 character cells, automatic global recalculation, and more. Has some limits on 128K, but still very useful. (Disk #5 runs on 128K, Disk #6 requires 320K and two drives.)

EASYRITE AND LABLFILE. EasyRite makes your jr perform like a typewriter, without learning complicated commands. On screen prompts are easy to follow. Lablfile is also easy to use for printing labels and storing information. Runs well on 128K with Epson/Gemini coded printers. (Disk #7)

PROCOMM. This powerful, yet easy to use telecommunications program has become the one favored by more PCjr users than any other. Dialing directory, auto redial, XMODEM, Kermit and other file transfer protocols, auto logon, DOS gateway, keyboard macros, exploding windows and many other features. The editor of PC Magazine called Procomm "competitive with the best comm programs on the market." Manual on disk. 256K (Disk #15)

PC-OUTLINE. Review in PC Magazine called this program "really fine" and it outperformed many commercial programs. Word processing functions are merged, allowing greater control. Many customizing features. Nine windows. Many useful features. 128K, plus DOS 2.0 or higher. (Disk #17)

PC-TOUCH. Designed to teach and practice touch typing. As you type, an on-screen line shows the number of erroneous keystrokes, and your accuracy rating as a percentage of keystrokes. 128K. (Disk #18)

3 X 5. An information management program that works just like a 3 X 5 card file. It offers speed, versatility and simplicity in entering, indexing and retrieving data. Has an integrated word processor, powerful search commands, multiple windows so you can edit in one and search in another, etc. Requires 256K. (Disk #19)

PC-DESKTEAM. Enables you to have an alarm clock, calendar, typewriter, calculator, and phone book accessible from your keyboard. Can be a resident program while you are using other software if you have the memory. 128K will run it alone. Need more to run it with other software. (Disk #22)

PC-PROMPT. A memory resident program that provides the format for DOS commands in an on-line mode. Help screen toggles on and off. Also help screens for BASICA, Turbo Pascal, Debug and EDLIN. 128K. (Disk #23)

PC-DOS HELP. Similar to PC-Prompt, but takes up less memory (16K) as a resident program. Geared to DOS 2.1 with special PCjr commands included. 128K (Disk #24)

PC-CHECK MANAGER. A menu-driven program that can handle multiple checkbooks, unlimited payees and ledger account assignments. Requires 256K. (Disk #25)

MINICALC. A small, easy to use, spreadsheet program. 11 columns by 22 rows. On-line help function and manual on disk. In addition to performing calculations, will generate bar graphs. 64K (Disk #27)

FAMILY HISTORY. Designed to help you trace your ancestry and create a family tree. 128K (Disk #33)

NEWKEY. Powerful, popular program that allows you to redefine keystrokes and assign series of keystrokes to one or two keys. Customize software to meet your needs. Many other useful features included. 128K (Disk #35)

PIANOMAN. A great music program! Allows you to write your own music, store it and play it on jr's terrific sound system. 128K (Disk #36)

PC-KEY DRAW. A powerful graphics program that allows you to draw, paint, produce slide shows, store and print your work. 256K, two drives. (Disk #37)

PC-KEY DRAW DEMO. Contains a slide show demonstration which allows you to see the amazing results you can get with PC-KEY DRAW. Helps to learn the many graphic capabilities of PC-KEY DRAW. (Disk #38)

PRINT HANDLER – Excellent software for printing banners, sideways, etc. Contains custom font generator, print spooler, and other useful print control utilities for Epson and compatible printers. 128K (Disk #51)

IMAGEPRINT. Produces letter quality print on dot matrix printers. IBM Graphics Printers, Proprinters, Epsons and compatibles. Contains many format features, three quality levels, interfaces with word processors. 128K ok (Disk #50)

UTILITIES

BATCH FILE UTILITIES. A tutorial on how to create batch files and six utilities to use. 128K (Disk #26)

SUPER UTILITIES. The 15 utilities in this collection include Undelete, to recover a mistakenly deleted file; a powerful command editor; a clock, notepad, time and calendar; another to redirect file contents from printer to disk....and many more useful utilities. Under 128K ok. (Disk #28)

MORE SUPER UTILITIES. A collection of excellent screen and keyboard enhancements, useful file managers, color selectors, and more. Under 128K ok. (Disk #29)

DOS 2.1 FIX. Patches to fix the bugs in DOS 2.1. Cures most problems encountered when running memory intensive programs. Also patches to run BASIC and BASICA on DOS 2.1 without having Cartridge BASIC installed. 128K ok (Disk #40)

DOSAMATIC. A nifty way to view the contents of disks, easily manipulate files and carry out DOS commands. Features a Mac-like "point and press" interface which allows you to select the commands you want from pull down menus. Also permits loading several programs at once and jumping from one to the other. 128K ok, but more memory needed for "multi-tasking." (Disk #49)

GAMES

GAMES. An assortment of games for hours of fun and excitement. Includes Spacewar, Airtrax, Life, Wumpus, Wizard and more. All good with 128K. (Disk #8)

DUNGEONS & WARS. In Dungeon Quest you can choose to be a dwarf, elf, magic-user, fighter or other type of character. You select your strengths and weapons, too. Then you enter the dangerous dungeons on your Quest. Thermonuclear War pits the US vs the Soviets in a very real demonstration of what a nuclear war might be like. Combat is a strategic battle on the ground. 128K ok. (Disk #9)

PINBALL RALLY. A colorful collection of amazingly realistic pinball games. Using the Shift keys as flippers, they games get more and more complex until you get to Twilight Zone, which is the hardest because some parts are invisible. Runs on 128K. (Disk #10)

REFLEX POINT. Patterned on the TV show Robotech, this game follows the show's storyline, with the Freedom Fighters trying to reach the Reflex Point and destroy the evil Invid Prince. 128K ok. (Disk #12)

TRIVIAL TOWERS. A computerized version of Trivial Pursuit, with three levels of difficulty and the option of creating and saving your own questions. Runs on 128K with one drive, but two drives are better. (Two Disks — #13A and 13B)

ADVENTUREWARE. Six different text adventures with titles like "Island of Mystery," "Terror in the Ice Caverns," and "Moon Mountain Adventure," all test your wits and take you on strange and mysterious places. 128K (Disk #14)

BUSHIDO. Test your skills in martial arts combat. Fighters kick, spin, duck, punch, etc. Requires 256K and keyboard with function keys. (Disk #16)

ARCADE GAMES. Includes Kong, Pango, PC-Golf, Pyramid and other exciting, colorful games for hours of fun. 128K (Disk #30)

BOARD GAMES. Play Monopoly against the computer. Backgammon, Yahtzee and Four — a game your jr is especially clever at. 128K (Disk #31)

GAMES, GAMES, GAMES. A wild assortment of games to test your wits and skills. Includes Slither, Xwing, Torpedo, ABM2 and Overeact, where you are in charge of a nuclear plant. 128K (Disk#34)

PC-CHESS. A full color many-featured chess program, with four levels of play. You can play against the computer or another human, save games to disk, set up the board yourself and switch sides if you want. It has two clocks for elapsed time for each player, allows castling, en passant and pawn promotion with vailidity checking, plus other features. 128K (Disk #44)

ZAXXON/GALAXY TREK. Two exciting high tech shoot-em-up games. In Zaxxon you fly through an obstacle course, shooting while you go, up and over walls, and eventually through space. Galaxy Trek makes you the commander of a Star Ship which you maneuver through the universe seeking to destroy a fleet of Megaton warships before they conquer the planets. 128K (Disk #45)

PHRASE CRAZE. Based on the TV show Wheel of Fortune, you get to be the guest who guesses the mystery phrases and wins piles of money! The wheel spins to select the amount of money you win for correct guesses. It gets harder with each round you play. You can add to your own phrases to this game or try to guess the ones provided on the disk. Lots of fun for adults as well as older kids. 128K (Disk #46)

GOLF/SAILING. Two great games for sailors and golfers! The golf game has three courses, user definable club ranges, and a swing control that determines whether you hit a slice, hook or straight shot. Three nine hole courses (Novice, Pro, and Sadistic). In the other game, you try to sail the three legs of the Bermuda Triangle, avoiding, if you can, the creeping mists, alien crystals, vortexes and storms. Your boat is equipped with radar, rudder and sail (all of which you control) and an engine for emergencies. 128K ok for sailing. Need 256K for golf. (Disk #47)

EARLY LEARNING. A collection of colorful educational games for children ages 6-8. Sing-along alphabet, letter matching, alphabet tutorial, number/counting game, maze, pattern matching and time telling. 128K (Disk #48)

EDUCATIONAL SOFTWARE

ORIGAMI. Learn the art of Japanese paper folding. This program shows you how, step-by-step, to create amazing animals and other objects just by folding paper. Fun for kids and adults, too. 128K (Disk #39)

EQUATOR. An excellent way to learn and review 35 basic equations used in math, finance and science. Learn to compute the volume of a cylinder, compound interest, or average velocity and much more. Manual to be printed from the disk provides back-up information. 128K. (Disk #20)

TIME TRAVEL IN HISTORY. A maze adventure game in which you have to answer questions about different periods of American History in order to get gold pieces — and save your life! 128K (Disk #21)

PLAY AND LEARN. Educational games for kids five and up. Word match games, find-a-word puzzles, word scrambles, etc. made for PCjrs by school teachers. 128K (Disk #32)

WORD PROCESSING FOR KIDS. Simple, fun and easy-to-use word processor designed especially for beginning writers. Allows children to express their ideas easily and then print them out in large type on your printer. Colorful opening menus make learning the simple commands very easy. Parents/teachers manual is on the disk. 128K (Disk#41)

MATH FUN! A great way to get kids learning how to add, subract, multiply and divide. Includes a program called Math Tutor which has cleverly designed exercises for kids in Grades 1-6. Also Funnels and Buckets, a nifty math game that makes learning math fun. 128K (Disk #42)

BRAIN BOOSTER. Includes IQ Builder, a program that both teaches and tests your ability to solve number, analogy, synonym and antonym problems like those on IQ and SAT tests. Also includes Algebra and Chemistry programs. For high school and up. 128K (Disk #43)

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PCjr Cartridges

Continued from page 1

the two can be used at the same time.

Computers with Direct Memory Access can accept keyboard input while the disk drive is being accessed, but the PCjr lacks DMA and so it beeps at you when you ask it to do these two things at once. The Keyboard Buffer Cartridge gives you "Pseudo DMA", not true DMA, but the effect is similar since you can go on typing just as you can on a PC or other computer with DMA.

The newest version of the Keyboard Buffer Cartridge, V 1.4, includes a new command designed to solve compatability problems earlier versions of the cartridge had with the Keytronics 5149jr Numeric Keypad, the Racore PC Keybord Adapter and some Datadesk AT style keyboards. It is compatible with Cartridge BASIC and the jr Video Cartridge.

Keylights Cartridge

Another new development in cartridges for PCjrs is Synectics' Keylights Cartridge ($18.95) which has three green lights imbedded in the cartridge to tell you when your CAPS LOCK, NUM LOCK and SCROLL LOCK keys are on. The lights are on the cartridge itself and they are activated by putting the proper command in your AUTOEXEC.BAT file or issuing the command at the DOS A > prompt.

Available from Synectics Software and Systems, P.O. Box 53501, San Jose, CA 95153-0501.

Look Ma, I'm a PC

Another cartridge that's been around for a while is Racore's PC ID cartridge ($15.95). This one tricks software into thinking your PCjr is a PC. Although it does not work for all software, it is one more way you can approach that elusive 100% compatability level with your PCjr.

Although we have not tested the PC ID Cartridge to determine what software will or won't run on it, we know that it will enable you to run the PC version of BASIC that is on DOS without having Cartridge BASIC installed. Ordinarily you will get the message "cartridge required" if you try to run BASIC from DOS without having Cartridge BASIC in your PCjr. (There are also software patches to allow you to run BASIC from DOS without Cartridge BASIC. These patches are now included on our DOS 2.1 Fix diskette #40).

PC ID Cartridges can be obtained from PC-Enterprises, Computer Reset or Solid Rock Electronics. Checks ads in this issue for phone numbers and addresses.

The development of the new cartridges for PCjrs is one more encouraging sign of continued vitality in the PCjr community. Manufacturers are betting that PCjr owners will want to improve their computers in order to get as much usefulness and pleasure out of them as possible.

So if you were thinking those two slots in front of your PCjr weren't good for anything but catching dust — think again. Maybe one of the enhancements now provided by cartridges can provide you with that extra measure of speed or versatility you want from your PCjr.

Wait!

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Lotus Installation Tips

Continued from page 2

insert a diskette for drive A. Ignore that prompt and strike any key.

Now type U, to save the updated configuration. Type Q to quit the menu. To erase the prompts from the screen, press [Fn 9]. Unless you change the configuration again, 1-2-3 will save files in drive A in all future sessions.

When running 1-2-3 you will have the 1-2-3 System Disk in drive A. Whenever you save your work, take the 1-2-3 System Disk out of drive A and insert a data disk.

Using PrintGraph on One Drive

The PrintGraph program, which is on a separate disk, has a separate configuration procedure. PrintGraph initially assumes that the picture files will be in drive B. I strongly recommend that you change your configuration to store the picture files in drive A. In this way, you will have the PrintGraph program, the picture files, and the font files on the same disk, eliminating the need to change disks when printing graphs. They do take a long time to print! Change the default directory that now reads Pictures: B: to Pictures A: , and update the configuration.

Additional Tips

That is it! Some tips to speed up calculations are to buy more memory (like 384k) so you can load Lotus in extended memory. Lotus will recalculate spreadsheets faster and also greatly speed up printing graphs. You may also want to invest in a Nec v20 chip if your old 8088 that came with your computer is socketed. This should increase the speed also.

Good Luck!

EXPAND YOUR PCjr

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RACORE memory board 384KB $75. "Using Symphony" by LeBlond & Ewing (QUE) unused $10. Hewlett Packard 12C $50. Voice: (516) 599-7238 David. You pay shipping.

IBM PARALLEL PRINTER ATTACHMENT – Original cost $99. Will sell for $35. Al Klingman, 1217 Tuxford Dr., St. Louis, MO 63146 (314) 997-6737.

PARALLEL PRINTER ATTACHMENT - $50. Jr joystick $15. Power expansion $35. Joe Tate, 7 Millhouse La., Cherry Hill, NJ 08003 (609) 429-3130. **Millhouse La., Cherry Hill, NJ 08003 (609) 429-3130.**

WANTED: 128K memory expansion sidecar for PCjr. Prefer IBM, but will take Microsoft. Should be in working order. Best Price. Contact Bud Norman, 505-1 Hope Terrace, Sunnyvale, CA 94086. (408) 733-4595 after 5 p.m. Pacific Time, or (408) 748-1010 Ext. 3305 days.

PFS:WRITE and PFS:FILE - $65 each or both for $125. Never Used. Bob Strong, 24950 Via Florecer #115, Mission Viejo, CA 92692. (714) 583-9250.

PCjr ROM CARTRIDGE KITS - Integrity Technology, 105 Serra Way, Suite 230, Milpitas, CA 95035-0604.

EPSON - PRINTER INTERFACE CARTRIDGE P/N 8690A for direct connection of Epson LX-90 or HomeWriter-10 Printers to PCjr Serial Port. Brand new with manual, cable, and connectors - $25. Paid $55. Phil Barboni, 2280 Shirley Way, Upland, CA 91786. (714) 981-7773.

IBM 128K MEMORY EXPANSION SIDECAR Paid $199 for it new. Will sell for $75 complete with disk and documentation. Bernie Rubenzer, 933 N. Marshall, Milwaukee, WI 53202. (414) 278-8168.

OLIVETTI PR 2300 ink jet printer w/ manual, cable, graphics disk, and extra ink. List price $470. Must sacrifice for $200. Kent Smith, 512 W. Jeneau St., Tampa, FL 33604.

TECMAR jr Captain – Will sell for only $75. Jim Babcock, 1141 Dover Ct., Safety Harbor, FL 33572. (813) 725-4829.

Classified Ads are free to subscribers of **jr Newsletter**. Just send us your typewritten ad of no more than five lines on an 8 1/2 x 11 page and we'll run it for you for two months. Ads are $10 per issue for non subscribers. Send to **jr Newsletter**, Box 163, Southbury, CT 06488.

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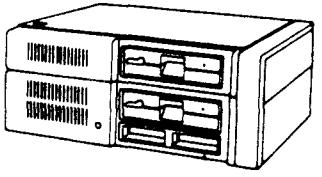

PCjr LIVES

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